

Response to the Reviewer's comments

The manuscript titled "Study on the synthesis of well-shaped Mn₃O₄ nanooctahedrons and their good performance for lithium ion batteries" is well-organized, and contains all the components.

However, it lacks some originality and depth necessary to justify the publication.

1. In introduction, 2nd paragraph, the authors described the literature review of the relevant field. But it lacks the necessary arguments to build the case for their approach. Providing more contrasting work of the peers to highlight the area where the authors' performed research work could help alleviate that issue. In this case to support their argument "the synthesis of Mn₃O₄ nanostructures with uniform size to improve their electrochemical properties is highly desirable."

Response: Thanks for reviewer's suggestion. In the revised manuscript, the related literatures of the peers have been compared (Page 1-2, Line 37-52.). The revised contents have been marked with blue fonts.

2. Another limitation was noticed for the originality of the work itself. The hydrothermal process has been utilized by numerous peers in this field to achieve specific morphology of Mn₃O₄. The manuscript would have benefited from a series of argument to build their case for their route or how their process is different and significant for the readers to learn about.

Response: Thanks for reviewer's suggestion. We agree with the reviewer's viewpoint that hydrothermal method can be used for the preparation of specific morphology of Mn₃O₄. Hydrothermal process is one common preparation method; it does not need complicated equipments, rigorous operating condition, and expensive chemicals. The product was synthesized in a homogeneous reactions and presented good reproducibility. So as to this work, the initial reactants are KMnO₄ and DMF, their toxicity is small. And also, they are the common chemical reagents. Based on above, we developed the preparation method of Mn₃O₄ nano-octahedrons and investigated their electrochemical performances.

3. This manuscript would also benefit from a close editing. I found it difficult to follow the author's argument due to the many stylistic and grammatical errors.

Response: Thanks for reviewer's suggestion. We have carefully checked and reedited the manuscript. Some stylistic and grammatical errors have been corrected. We hope the revised manuscript can meet the submission requirements of *Nanomaterials*. The revised contents have been marked with blue fonts.

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